

2157 *EW*

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventor Application of: MCELWAIN, Thomas P.

Group Art Unit: 2157

Serial No. 10/531,772

Examiner:

Filing or 371 (c) Date: 04/19/2005

Atty. Dkt. No: 20030076-US

For: JOINT SYMBOL, AMPLITUDE, AND RATE ESTIMATOR

To: Mail Stop Amendment  
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Transmitted herewith is the Applicant's Information Disclosure Statement, 2 sheets form PTO/SB/08A and/or PTO/SB/08B, and 10 references and other information. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003. Please enter in the above application and communicate in all related matters with the undersigned.

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Respectfully submitted,

*Scott J. Asmus*

Scott J. Asmus, Reg. No. 42,269  
Andrew P. Cornota, Reg. No. 52,711  
Attorneys/Agents for Applicant

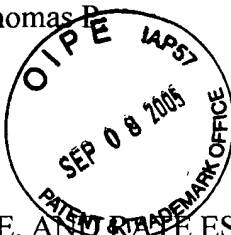
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INFORMATION DISCLOSURE STATEMENT

Applicants submit this statement and the attached 2 sheet(s) of form PTO/SB/08A and/or PTO/SB/08B and 10 references and other information in accordance to the duty of disclosure under 37 C.F.R. §§1.56, 1.97, and 1.98, and requests consideration hereof. Pursuant to 37 CFR 1.98 (a)(2)(i) applicant has not transmitted herewith copies of cited U.S. Patents and U.S. patent application publications as the above application was filed after June 30, 2003.

Compliance with 37 C.F.R. §1.97: This Information Disclosure Statement is filed within three (3) months of the filing date of a National Application or before the mailing date of a first office action on the merits. No fee or certification is required.

Information Cited: The Applicants hereby make of record in the above-identified application, the information listed on the attached form PTO/SB/08A and/or PTO/SB/08B. The order of presentation of the references should not be construed as an indication of the importance of the reference. As all the references listed on attached Form PTO/SB/08A and/or PTO/SB/08B are in English, no commentary is required.

Remarks: A copy of each reference, together with a listing on Form PTO/SB/08A and/or PTO/SB/08B, is submitted herewith. Applicants respectfully request that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;

2. The enclosed form PTO/SB/08A and/or PTO/SB/08B be signed by the Examiner to evidence that the cited information has been fully considered by the Patent and Trademark Office during the examination of this application; and

3. The citations for the information be printed on any patent which issues from this application.

By submitting this Information Disclosure Statement, the Applicants make no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

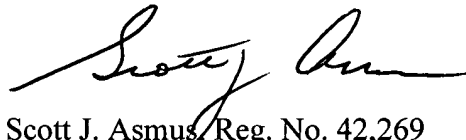
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Notwithstanding any statement by the Applicant, the Examiner is urged to form his own conclusion regarding the relevance of the cited information.

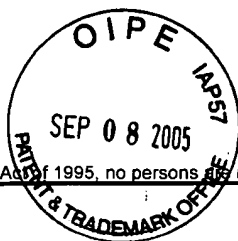
An early and favorable action is hereby requested.

Respectfully submitted,



Scott J. Asmus, Reg. No. 42,269  
Andrew P. Cernota, Reg. No. 52,711  
Attorneys/Agents for Applicant

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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**Complete if Known**

Application Number	10/531,772
Filing Date	04/19/2005
First Named Inventor	McElwain, Thomas P.
Art Unit	2157
Examiner Name	
Attorney Docket Number	20030076-US

Sheet 1 of 2

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 6,298,461	10-02-2001	Tong et al.	
		US- 6,373,858 B1	04-16-2002	Soleimani et al.	
		US- 6,473,417 B1	10-29-2002	Herzog	
		US- 6,510,536 B1	01-21-2003	Crozier et al.	
		US- 6,574,291 B2	06-03-2003	Doetsch et al.	
		US- 6,704,376 B2	03-09-2004	Mills et al.	
		US- 6,839,390 B2	01-04-2005	Mills	
		US- 2002/0110206 A1	08-15-2002	Becker et al.	
		US- 2002/0122464 A1	09-05-2002	Dodge	
		US- 2003/0031237 A1	02-13-2003	Bachl et al.	
		US- 2003/0074191 A1	04-17-2003	Byrnes et al.	
		US- 2003/0086512 A1	05-08-2003	Rick et al.	
		US- 2003/0102905 A1	06-05-2003	Ha et al.	
		US- 2003/0125937 A1	07-03-2003	Thomson	
		US- 2003/0128836 A1	07-10-2003	Stephens et al.	
		US- 2003/0138054 A1	07-24-2003	Ha et al.	
		US-			
		US-			
		US-			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				

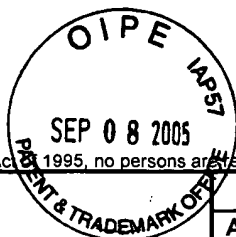
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Examiner Name	
Attorney Docket Number	20030076-US

Sheet 2 of 2

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		CHAN, ALBERT M. et al., "A CLASS OF ASYMPTOTICALLY OPTIMUM ITERATED-DECISION MULTIUSER DETECTOR", pp. 1-4.	
		VERDU, SERGIO, "Minimum Probability of Error for Asynchronous Gaussian Multiple-Access Channels", IEEE Transactions on Information Theory, January 1986, pp. 85-96, Vol. IT-32, No. 1.	
		LUPAS, RUXANDRA et al., "Linear Multiuser Detectors for Synchronous Code-Division Multiple-Access Channels", IEEE Transactions on Information Theory, January 1989, pp. 123-136, Vol. 35, No. 1.	
		LUPAS, RUXANDRA et al., "Near-Far Resistance of Multiuser Detectors in Asynchronous Channels", IEEE Transactions on Communications, April 1990, pp. 496-508, Vol. 38, No. 4.	
		ALEXANDER, PAUL D. et al., "Iterative Multiuser Interference Reduction: Turbo CDMA", IEEE Transactions on Communications, July 1999, pp. 1008-1014, Vol. 47, No. 7.	
		VARANASI, MAHESH K. et al., "Near-Optimum Detection in Synchronous Code-Division Multiple-Access Systems", IEEE Transactions on Communications, May 1991, pp. 725-736, Vol. 39, No. 5.	
		DUEL-HALLEN, ALEXANDRA, "Decorrelating Decision-Feedback Multiuser Detector for Synchronous Code-Division Multiple-Access Channel", February 1993, pp. 285-290, Vol. 41, No. 2.	
		WEI, LEI et al., "Synchronous DS-SSMA System with Improved Decorrelating Decision-Feedback Multiuser Detection", IEEE Transactions on Vehicular Technology, August 1994, pp. 767-772, Vol. 43, No. 3.	
		WANG, XIAODONG, et al., "Iterative (Turbo) Soft Interference Cancellation and Decoding for Coded CDMA", IEEE Transactions on Communications, July 1999, pp. 1046-1061, Vol. 47, No. 7.	
		POOR, H. VINCENT, "Turbo Multiuser Detection: An Overview", IEEE 6th Int. Symp. on Spread-Spectrum Tech. & Appl., September 6-8, 2000, pp. 583-587.	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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